

Micro-environmental Sensor Pod (MSP)

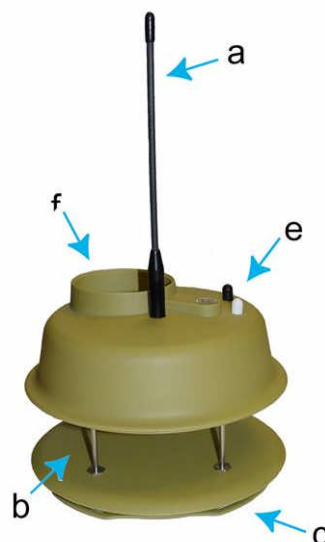
smiths

Smiths Detection

Date Revised: 25 NOV 03

VENDOR DESCRIPTION

Smiths Detection is a commercial partner for ADA Technologies, which has developed auto-networking Micro-environmental Sensor Pods (MSP). The MSPs are robust, lightweight, low-power, expendable and capable of measuring multiple parameters: Wind speed and direction, compass orientation, pressure, air temperature, radiant temperature, humidity, rainfall, and location (via GPS). Each unit is extremely compact and weighs less than 1 lb with batteries. The MSP may be deployed to create a network that covers an entire battlefield. Data from the pods (including GPS location) is transmitted to remote handheld stations via a radio modem, providing a snapshot of environmental conditions in the area of interest. For widely distributed networks, the radio modems in individual MSPs also function as relays to extend the network's range.



Each Pod Contains:

- a Radio Antenna
- b Ultrasonic Anemometer for wind speed & direction
- c 4 AA Lithium Batteries
- d GPS Receiver
- e Radiant Temp. Sensor
- f Rain Gauge

Also:

- Compass
- Radio Modem (900 MHz)
- Barometric Pressure Sensor
- Humidity Sensor
- Air Temperature Sensor
- 2-Axis Level Sensor

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Business Category: Large Business

MET

Hardware

Power: 80mW	Operating Speed: 0-35 m/s
Weight: 1.0 lbs	Operating Temp.: -40° to 60°C (-40° to 140°F)
Dimensions: 1500 mm DIA x 1100 mm tall	Storage Temp. -40° to 60°C (-40° to 140°F)
Internal Volume: 0.03 ft ³	Interface: RS-232 through 900MHz Radio Modem
	Bandwidth Required: 350 bytes/hour transmitted at 9600 Baud
	TCDL Compatibility: No
	MTBF: Under Testing
	MTTR: Under Testing
Operating Altitude: 0 ft to 15,000 ft AGL	Maintainability: TBD

Performance

Wind Speed: 0-35 m/s, ± 0.2 m/s or 5%	GPS Location: <10m
Wind Direction: Range 0-360°, $\pm 5^\circ$	Communications (900 MHz): 10 mile line-of-sight
Temperature: Range -30°C to +55°C $\pm 0.3^\circ\text{C}$	
Barometric Pressure: Range 600-1100 hPa, ± 0.65 hPa	
Relative Humidity: Range 0-100%, $\pm 2\%$	
Rainfall Rate/Accumulation: Range 0-12" per hour, $\pm 10\%$	
Compass Orientation: $\pm 2^\circ$	